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ABSTRACT

This paper: (1) provides the conceptual underpinnings of the knowledge about effective school practices that bear directly on the quality of the teacher workforce; and (2) analyzes current policy decisions and their ability to affect positive changes. Working conditions enhancing teacher commitment, retention, and teaching effectiveness are examined across a wide range of studies. Teacher rewards, teacher certainty and skill development are considered as variables affecting teacher commitment. Teacher evaluation, buffering, managing student behavior, teacher isolation, faculty collaboration, participation in decision-making, and organizational rigidity and flexibility are discussed as organizational determinants of teacher commitment. Other major points discussed are standards for student learning and career ladders. Some states have begun to set skill-specific standards and learning sequences that all teachers must cover in the curriculum. Periodic testing of students is used to monitor the conformity to new standards. However, use of minimum competency tests can result in unintended negative consequences and lowered teacher commitment. Career ladder plans offer teachers increased salaries and status in return for additional responsibilities. A five-page bibliography is appended. (JAZ)

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NEEDED RESOLVES FOR EDUCATIONAL RESEARCH

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NEEDED RESOLVES FOR EDUCATIONAL RESEARCH

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Since the report of the National Commission on Excellence in Education prophesized an omen of doom for public education nearly two years ago, educational policy-makers in nearly every state have scrambled to predict and conquer educational events and practices that appear most out of control. Underlying much of the current flurry of reform activity is the assumption that the teacher's effectiveness in no small way accounts for the adequacy of student learning. From the researcher's viewpoint, the teacher workforce is indeed sorely troubled. Shortages of qualified teachers have already begun to appear in some states (NCES 1984). The intellectual caliber of new teaching recruits, at least to the extent that it is revealed by measures of verbal ability, is considerably lower than was true a decade ago (Schlechty & Vance 1981; Weaver 1981). The ability of schools to retain their most academically talented teachers, again as revealed by tests of verbal ability, is also disheartening (Lyson & Falk 1984; Pavalko 1970; Schlechty & Vance 1981). And while the success of those who remain in teaching wanes considerably after five years of experience (Katzman 1971; Levin 1975; McLaughlin & Marsh 1978; Summers & Wolfe 1977) their rates of retention in the workforce far exceed that of novices in the early stages of their teaching careers (Burlingame 1980; Charters 1970; Pederson 1970).

Because of widespread--and largely justified--alarm about the status of our nation's teaching corps, many states and localities are seeking through various means to improve their teaching forces. These efforts take many forms: written examinations for teachers, extended apprenticeship periods, financial incentives and rewards for classroom excellence, various schemes for evaluating teacher performance, and more. The plethora of interventions initiated, however, appear to rest on no solid base of valid and widely-accepted knowledge about the teaching occupation. The many attributes of effective teachers are not well understood. The sources of teacher effectiveness are even less well known. The organizational and occupational influences on teaching excellence are poorly mapped. The incentives and rewards that motivate individuals to enter the workforce, to remain teachers, and to become more effective teachers, are the subject of much conjecture by policy makers, but little available knowledge.

How can the academically talented be drawn into teaching? How can persons of ordinary ability be furnished with training, experiences, occupational conditions, and rewards that will make them more effective teachers? How can effective teachers be retained in the classroom? These are but a few of the fundamentally important questions to which policy makers need answers if the fruits of their labors are to yield a more abundant harvest in improving public education.

To resist the blandishment of well-intended but ill-informed social engineering, to provide feedback into the policy-making process so as to encourage good ideas, discourage bad ones, and permit wise mid-course corrections--these are the goals that deserve full attention and support from

the research community. The gathering of systematic information about the effects of various policy changes represents nothing less than a rational basis for further decision-making, planning, and action. And with the wide variations in policy changes currently underway in states and localities, the opportunity is at hand to do precisely that.

Although sorely underutilized by policy makers, in a research sense we are already mounting a successful front against the common enemy of low school productivity. And we are equipped with sufficient conceptual, analytic, and methodological clarity, and a secure enough knowledge base, to launch further forays. In the section that follows I provide the conceptual underpinnings, but by no means an exhaustive description, of the knowledge about effective school practices that bear directly on the quality of the teacher workforce. I will look at the ways working conditions enhance teacher commitment, retention, and teaching effectiveness across a wide range of studies. Armed with this conceptual understanding, current policy decisions and their ability to affect positive changes will then be analyzed.

The Dimensions of Teacher Commitment

That the most vital resources for student learning are the contributions of effort and involvement from teachers is a proposition few would dispute. Teacher commitment and its attendant behaviors, however, are not categorical or unvarying commodities. They depend to no small extent on the incentives and opportunities offered by the school and on the organizational conditions under which teachers work. In particular, teachers are motivated both to remain within a setting and to contribute productively only so long as the inducements offered them are as great or greater than the contributions they are asked to make (Locke 1975; March & Simon 1958). In other words, the rewards of one's work must outweigh the frustrations.

Teacher rewards. There is limited information on the importance of monetary rewards in securing teachers' commitment, but the extant data provides little empirical evidence that increased pecuniary benefits bring about positive changes in teachers' performance (Mann 1985; McLaughlin & Marsh 1978), or prevent their defection from the workforce (Bredeson, Fruth & Kasten 1983; Bruno 1981a; Chapman & Hutcheson 1982; Frataccia & Hennington 1982). Teaching rewards instead flow directly from feelings of efficacy: from recognition of one's own capacities to affect student growth and development (Bishop 1977; Bredeson, Fruth & Kasten 1983; Glenn & McLean 1981; Lortie 1975; McLaughlin & Marsh 1978).

Teachers' inability to accrue psychic dividends from their work may manifest itself most dramatically in a decision to defect from the workforce (Bredeson et al. 1983; Chapman 1984; Chapman & Hutcheson 1982; Litt & Turk 1983; Rosenholtz et al. 1985). The link between dissatisfaction and actual defection, however, may be mediated by the alternatives individuals perceive to be available (Locke 1975; March & Simon 1958). A lack of alternative types of employment, for example, may cause dissatisfied teachers to stay where they are and simply withhold service. Although the particular manifestations of withheld service are not fully known, there is evidence that workers sometimes absent themselves to provide temporary relief from unsatisfactory job conditions (Johns & Nicholson 1982). Indeed, teacher absenteeism is

particularly prevalent in ineffective low SES schools (Bruno 1981b; Bruno & Doscher 1981; Spuck 1974), where large discrepencies sometimes exist between the inducements of teachers' work, and the contributions they are expected to make.

Teacher certainty. In addition to psychic inducements, productive involvement in work also requires challenge (Locke 1975). Challenge stimulates involvement by requiring that individuals exercise judgement and choice; in doing so, they become the main causal agents in performance. Further, coping with challenge requires the expenditure of effort. If this expenditure produces some improvement in performance, commitment is enhanced. Individuals move initially toward confronting challenge, however, only when there is a reasonable chance of success--some assurance that their efforts will produce desired outcomes (Campbell & Pritchard 1975). In the case of teachers, commitment to meet classroom challenges pivots fundamentally upon their certainty about professional practices--a belief in their ability to help students grow and develop (Azumi & Madhere 1983; Glidewell et al. 1983; McLaughlin & Marsh 1978; Rosenholtz et al. 1985). When certainty pertains, it defines and organizes teacher action to facilitate student learning (Armor et al. 1976; Ashton et al. 1983; Brookover et al. 1979; McLaughlin & Marsh 1978). The other side of the same coin is that challenges perceived as too great or costly may cause individuals to experience a sense of failure and frustration, leading often to inaction (Locke 1975). In other words, teachers who are uncertain about their capacity to affect student learning tend not to act in ways that will bring learning about. One need only consult the plethora of research on differential teacher expectations to see how powerful this self-fulfulling prophecy can be (for a review, see Hawley & Rosenholtz 1984). Because the products of uncertainty--e.g. low student learning and teachers' sense of failure--ultimately diminish teaching rewards, it is not surprising that teachers who lack confidence in their professional skills tend to show higher rates of absenteeism and defection from the workforce (Chapman 1984; Chapman & Hutcheson 1982; Litt & Turk 1983).

Skill development. To secure individuals' commitment, the work setting must not only provide challenges, it must also provide opportunities to deal successfully with them (Locke 1975). It follows therefore, that opportunities for skill acquisition and development that enhance teachers' capabilities are heavily implicated in their commitment. While there is a dearth of research on this assertion, the significance of skill development for disaffection seems logical enough: limited opportunities for professional growth impair teachers' certainty about instructional practice, their effectiveness, their acquisition of intrinsic rewards, and ultimately their commitment to the school and profession (see, for example, Huberman & Miles 1984; Rosenholtz et al. 1985). Not unexpectedly, the absence of opportunities for professional growth is frequently cited by teachers as a reason for disaffection and attrition (Bredeson et al. 1983; Mann 1985; Rosenholtz et al. 1985).

The three intervening variables affecting commitment--teacher certainty, skill acquisition, and rewards--rely heavily on the actions of others within the school--colleagues and principal--and are thus strongly influenced by specific organizational policies and practices. I turn next to a description of these additional factors.

Organizational Determinants of Teacher Commitment

Teacher evaluation. Skill acquisition, certainty, and rewards depend to no small extent on feedback about one's performance--for teachers, on evidence of student growth and learning. Yet teachers frequently indicate difficulty in knowing precisely how well they are doing (Ashton et al. 1983; Glidewell et al. 1983; Lortie 1975), leaving many uncertain, unrewarded, and without the specific information needed to redirect their energies toward improvement. Ambiguity about the nature of one's performance springs at least in part from an absence of both clear goals around which to mobilize teaching efforts, and clear criteria by which teacher performance is monitored and evaluated.

While many school administrators muster little effort to resolve this ambiguity for teachers, those in the most effective schools develop clear goals and ubiquitously monitor classroom efforts toward their pursuit (Glenn & McLean 1981; Hort, Steigelbauer & Hall 1984; Natriello 1984; Natriello & Dornbusch 1980; Sizemore et al. 1983; Venezky & Winfield 1979). With clear, useful, and frequent evaluation, teachers can work directly to improve performance; as performance improves, there is greater certainty about instructional practice, and with it renewed teacher effort and larger psychic dividends (Rosenholtz et al. 1985). It is not surprising, therefore, that teachers report greater satisfaction and commitment where principals provide frequent and clear evaluation (Azumi & Madhere 1983; Chapman & Lowther 1982; Natriello 1984; Natriello & Dornbusch 1980; Rosenholtz et al. 1985).

Buffering. Greater commitment is also secured by working conditions that facilitate individuals' attainment of work goals (Locke 1975), for teachers, on conditions that optimize the possibility of student learning. Intrusive managerial tasks that pull teachers away from instruction are frequently culpable in the absence of their skill acquisition, certainty, rewards, and commitment (Bredeson et al. 1983; Lortie 1975; Raschke, Dedrick, Strathe, & Hawkes 1985; Rosenholtz et al. 1985).

Efficacious principals (or their administrative cadre), themselves certain of the relationship between teacher effort and student learning, work to "buffer" teachers from unnecessary intrusions that distract them from the substance of their work. Buffering activities include attending to the material requirements and organization of instructional programs, providing clerical assistance or outside resources for routine, non-teaching tasks, and protecting classroom learning time from interruptions such as loud speaker announcements and other low priority matters (Armor et al. 1976; Glenn & McLean 1981; Hort et al. 1984; Rutter et al. 1979; Venezky & Winfield 1979).

Managing student behavior. Effective administrators also distinguish themselves from their ineffective counterparts by setting and enforcing clear expectations for student behavior (Brookover et al. 1979; Glenn & McLean 1981; Rutter et al. 1979). A climate of disorder does more than frustrate teachers; when teachers attend constantly to mediating classroom disputes, they do so at the expense of their students' learning time, their own instructional improvement, their confidence about teaching skills, and any psychic rewards that follow (Raschke et al. 1985; Rosenholtz et al. 1985). This explains why teachers often cite student misbehavior as a cause for dissaffection and attrition from the workforce (Bredeson et al. 1983; Raschke et al. 1985; Rosenholtz et al. 1985). And since learning to manage student behavior is the first important task of the teaching neophyte--and one that is used as an

initial measure of their potential (Hoy 1969; McArthur 1979; Warren 1975)--it is not surprising that attrition is highest in these early years of teaching.

Teacher isolation. Most schools are characterized by isolated working conditions, where colleagues seldom see each other teach (Bishop 1977; Cohen 1981; Lortie 1975). Under these conditions norms of autonomy develop, where the responsibility for classroom success resides solely with individual teachers (Bishop 1977; Glidewell et al. 1983; Lortie 1975). Requests for and offers of assistance among faculty are believed to carry status information about relative teaching competence: teachers tend not to request assistance for fear of appearing incompetent; teachers tend not to offer assistance for fear of implying incompetence (Glidewell et al. 1983; Lortie 1975). We know little about how such faculty norms develop, but it is reasonable to suppose that the primarily social conversations that characterize teachers' interactions in isolated settings (Bishop 1977; Glidewell et al. 1983; Little 1982) occur in an effort to avoid these status implications.

Professional isolation has a profound effect on teachers' skill acquisition, certainty, and intrinsic rewards. For one thing, their capacity for growth is limited in isolated settings by their own ability to diagnose problems, develop solutions, and evaluate their effectiveness (Lortie 1975). With little access to role models among their peers (Gehrke & Kay 1984; Lortie 1975), they realize little benefit from their more experienced and expert colleagues. Similarly, the intrinsic rewards to be derived from colleagues' positive evaluations of one's skills and ideas are foregone in isolated settings (Rosenholtz et al. 1985).

Faculty collaboration. Not all schools are isolated workplaces; in the more collaborative settings of effective schools, teachers come to believe that teaching is a collective rather than an individual enterprise. Professional dialogue among colleagues in these schools is frequent, and analysis, evaluation and experimentation with colleagues set the conditions under which teachers improve instructionally (Armor et al. 1976; Little 1982; Mann 1985; Rutter et al. 1979; Venezky & Winfield 1979). In collaborative settings, teachers interact more about professional than social matters, and interact with a greater number of colleagues than is true in more isolated settings (Bishop 1977; Bridges & Hallinan 1978; Glidewell et al. 1983; Little 1982). Ideas that are the product of collaborative exchange appear to give rise to greater experimentation in classrooms, and greater teacher learning and certainty, as better solutions to teaching problems are found (Rosenholtz et al. 1985). And it is precisely these conditions that most clearly explain why teacher absenteeism and defection are substantially lower in collaborative than in isolated settings (Bridges & Hallinan 1978; Litt & Turk 1983; Rosenholtz et al., 1985; Sizemore et al. 1983; Venezky & Winfield 1979).

We know therefore, that informal learning experiences can and do influence teaching knowledge. Strikingly absent for the literature, however, are studies that look at the combination of formal and informal mechanisms that shape teachers' beliefs about the definition of "what good teaching is," that accentuate or enhance the acquisition of skills, that define the standards by which teachers measure their success in teaching, and that therefore signal the need to develop new teaching skills or perfect old ones.

Participation in Decision-Making. One informal mechanism that may account for collaborative exchange among faculty in efficacious schools is teachers' participation in decision-making about matters related to teaching, e.g.,

selecting instructional materials and methods (Armor et al. 1976; Glenn & McLean 1981; Rosenholtz et al. 1985; Rutter et al. 1979). The contribution of decision-making to teachers' skill acquisition and certainty lies in the deliberative evaluation, discussion, suggestion, and modification of instruction required to enhance the quality of classroom learning. These activities themselves may lead to increased teacher clarity about instructional purpose, and ultimately, to greater effectiveness, as decisions become conscious and well-reasoned choices rather than arbitrary or automatic reactions (e.g. Cruickshank 1985; Mann 1985).

In addition to its effects on skill acquisition, certainty, and intrinsic rewards, participation in decision-making may directly augment commitment through an increased sense of school ownership as teachers identify their own important contributions to a valued collective enterprise. The point here, of course, is that teachers who do not subscribe to the faculty's purpose are not likely to contribute their full efforts. This explains most clearly why the absence of teachers' involvement in decision-making is positively related to their absenteeism and defection (Azumi & Madhere 1983; Chapman & Hutcheson 1982; Rosenholtz et al. 1985).

Organizational rigidity and flexibility. Another informal mechanism that is implied by norms of collaboration and decision-making is the organizational flexibility necessary to alter instructional programs to meet specific classroom needs. However, uncertainty about the ability of teachers to help students learn may sometimes lead principals to apply excessive pressure for conformity to rules and regulations which may themselves be overly specific. Insistence on ritualistic adherence to school procedures not only leads directly to profound teacher disaffection (Hoy, Tarter & Forsyth 1978), it also produces greater feelings of powerlessness and uncertainty (Cox & Woods 1980) and diminished focus on learning goals (Willower & Jones 1963). In the end then, organizational rigidity reduces teachers' ownership of instructional programs and pays few dividends in teachers' skill development, psychic rewards, or commitment (Raschke et al. 1985; Rosenholtz et al. 1985).

Education Reform

In the preceeding discussion I have emphasized the importance of workplace conditions in helping teachers develop, perfect and add to their fund of teaching skills throughout their professional lives. This conceptual understanding provides a framework to gauge the educational efficacy of many reform proposals that have gained considerable currency among policy-makers. The central question in all discussions of school reform is, of course, the extent to which changes will improve the quality of instructional services that schools deliver. How can schools be restructed in ways that permit teachers to use their talents most productively in helping themselves and others to improve instruction? How will new standards for student learning affect what teachers actually emphasize in their classrooms? How will the performance recognition and status elevation of more talented teachers as proposed in various career ladders plans affect both their motivation and commitment as well as that of others? Under what conditions are these innovations most likely to succeed?

While any number of reform efforts might be juxtaposed against our cumulative knoweledge, I examine the effects of two specific proposals--standards for student learning and career ladders--to illustrate the

rather straightforward proposition that through careful research and analysis, sound information about intervention strategies supplied to policy makers will enable them to make sense out of the many events that are occuring so that they can be helped to foster and support further school improvement.

While any school intervention can be developed, funded, supported and delivered to schools to help them improve, the ultimate measure of their success depends to no small extent on how the intervention is executed. In this the teacher is crucial. How teachers perceive and experience policy changes will affect their commitment to them and the extent to which the policy change will have a salutary effect on student learning. To explore teachers' perceptions, I turn to data from our ongoing study of the organizational conditions of teaching (Rosenholtz, Bassler & Hoover-Dempsey 1985) conducted in a Southeastern state where a career ladder plan (CLP) and minimum competency testing (MCT) are currently under implementation. Data from extensive interviews we have conducted with 73 randomly selected elementary teachers statewide will illuminate many of the issues I raise. I will also draw upon contemporaneous work by others who seek to chronicle and understand the effects of reform efforts underway elsewhere in the nation.

STANDARDS FOR STUDENT LEARNING

Some states have begun to recognize past inadequacies in the way student performance is monitored, and attempts are now underway to institute appropriate changes. One such strategy sets skill-specific standards and learning sequences that all teachers must cover in their classroom curriculum. Conformity to new standards is monitored through the periodic and frequent testing of students.

The Importance of Standards

Of fundamental importance to any policy study of educational reform is the definition of student learning itself. In isolated settings, teachers' and administrators' perceptions of student learning are highly individualistic, since they are based on those classroom activities and student behaviors that each considers important. They may include students' problem solving skills, peace and quiet in the corridors and classrooms; the development of youngsters' self-concept; children's basic skill acquisition; the inculcation of racial tolerance and friendly interpersonal behavior, and so on.

Yet the literature on effective schools apprises us of the importance of shared organizational goals (Rosenholtz 1985a). Where there are particular goals for students' basic skill acquisition, agreement among teachers and administrators as to their importance, and collaboration about the means by which to implement them, there is an organizational basis for directing teacher behavior, for motivating teacher behavior, and for evaluating teacher behavior. Goals, then, can be useful in mobilizing the efforts of school personnel by providing specific targets and directions for change.

In the southeastern state we have been studying, the department of education established MCT for elementary grade students, by identifying 1,300 skills in reading and math, of which 680 must be learned. The interviews we

conducted with teachers two years after implementation revealed uniformly high conformity to the guidelines as well as accompanying changes in teachers' instructional emphases.

Twenty-two percent of the teachers interviewed found the guidelines helpful in detecting students' learning difficulty, and, of far greater significance, in changing the way learning is perceived by both students and teachers. As one explained, "I find skills that children don't have and so I have to teach them. Now teachers care that students learn. Before they could just teach and if the students learned, okay; if not, they could just go on to the next thing. The kids also know that 'I have to know this' and 'my teacher cares that I get it.' So it helps." Others concurred with the meliorative effects of MCT on poorer teachers, e.g. "I think the standards are more effective for teachers who need guidelines." In fact some teachers hailed the change as a way to orient their own classroom instruction, thereby ensuring that the most important skills receive adequate time and attention: "I think it helps a teacher measure her own teaching. Lots of times I will compare my tests with their [the state's] guidelines. Now I'm more aware of some specific skills and how well I have taught them as well as how well they're covered in the curriculum." Darling-Hammond and Wise (1985), in their study of evaluation practices in two middle-Atlantic states, also found that a minority of teachers regarded MCP as a good management tool for helping less competent teachers to do their jobs, and for ensuring that a specific body of knowledge was covered in the classroom curriculum.

A critical factor in the study of state level intervention, then, at least at the elementary school level, is the extent to which standards alter the goals that teachers' set for themselves, what they come to emphasize in their classroom curricula, and how their teaching effectiveness is gauged. That is, where standards for student evaluation are clearly specified, and where teachers may also be judged by their students' abilities to reach these standards, instructional content may become driven by newly implemented standards and their measurement. Anecdotal evidence suggests that this may be already occuring in Texas, Detroit, South Carolina; and Maryland (Popham, Cruse, Rankin, Sandifer, & Williams 1985).

Unintended Consequences of MCT

Organizational rigidity. MCT, however, was not uniformly welcomed by all teachers, and there were some unintended and negative consequences in its implementation. One concern, voiced as well by teachers in the Darling-Hammond and Wise (1985) sample, was that rigid standards impaired teachers' discretion to match appropriate learning objectives to particular student needs. Over one third of our sample expressed this objection, e.g., "All kids are to be exposed to all skills. I don't think that does any good. If you progress too fast, the kids still lose out. The kids have to learn the basics first, or it won't do any good to expose them to other skills"; "Sometimes I give tests at different times than I'm supposed to. I'll teach the skills first, and then give the test, regardless of when they say I'm supposed to give the test. It doesn't make much sense to test kids on stuff they haven't studied"; "It used to be that we would take up where the kids were and you would go as far as you could with them. Now they say we are not to do that anymore"; "The business of

all second grade teachers teaching the same across the state, being on the same unit, the same page, is the most absurd thing I have ever heard in my life. We are all supposed to be teaching the same thing at the same time so if a child transfers from one school or system across the state, they won't be behind"; "There are too many skills to get through when some children can't even regroup. Because children are different you have to make allowances for them"; "With the Basic Skills Program everyday I feel more frantic. I feel like a cattle-driver with a whip: like we have to get through the pass before nightfall."

In the implementation of MCT, then, teachers confront a dilemma between the coverage of required basic skills on the one hand, and rudimentary mastery of them, on the other. Thus a critical question in the study of MCT is the extent to which it allows for local variations within students' skill levels, and local deviations from statewide norms. To inhibit the appropriate pacing of instruction to accomodate different learning needs or to prevent the adaptation of curricular content to improve its fit to those needs, is to unwittingly program students and teachers for greater academic failure.

Another quarter of the teachers in our sample complained that curricular areas other than reading and math were being short-changed by state standards. Even kindergarten teachers lamented these effects: "I am not able to do things that are good for kindergarteners. I feel like I have to hide in my room to let children have show-and-tell"; "I wanted to do more creative dramatics and storytelling [this year]. I wanted to expand my study of marijuana that I instituted last year. Maybe draw in some teenagers to talk with the class. But there is not a lot of time to do anything like that. I did the drug unit during health but I had to steal time for the dramatics." Darling-Hammond and Wise (1985) also found that the need to ensure that their students pass competency tests caused teachers' to de-emphasize other important aspects of the curriculum.

Lest readers doubt the value of alternate learning opportunities, they need only consider the effects of MCT on language arts curricula alone. Writing instruction and practice in some classrooms have been replaced by rote exercises in sentence diagramming (Suhor 1985), an ineffective instructional strategy in helping students better their writing skills (Sherwin 1969), but nonetheless content most likely to appear on competency tests (Suhor 1985). It is indeed an unfortunate side effect if students' opportunities to master a broad base of knowledge are undermined because teachers divert their instructional emphases either to material that is to be tested, or, worse still, to the teaching of test-taking skills themselves. This latter charge was alleged by Los Angeles school board member and teacher Jackie Goldberg: "Teachers who used to spend time reading to children so they will love literature will now have them bubbling in dots [filling in computer cards] of how basesballs are stitched because this is one of the questions on the standardized tests." (Chicago Tribune, June 2, 1985, p. 13).

A third of the teachers we interviewed balked at the standardization demanded by the MCT which in their view destroyed teacher creativity and spontaneous teaching, e.g., "Teaching has become more mechanical; [the MCT] took away creativity and the teacher's individuality"; "The system has become very dictatorial. I mean I ask myself all the time, 'I wonder where all the creative teachers will be in ten years'"; "Twenty years ago they would say to me, 'As long as you get the skills taught, do it your own way.' We are as

individual as the children are. And what works for my next door neighbor doesn't work for me. It's amounting to having all teachers teach the same way."

The absence of buffering. By far and away, the most onerous aspect of MCT to three-quarters of the teachers in our sample was both the overwhelming burden of additional paperwork, and the classroom time required to test. Over both these points there was nearly unanimous accord--e.g., "You have to assess and reassess each child, you have to pre- and post-test each child. I want to keep good records; I always have kept good records, but things are just getting out of hand." A kindergarten teacher complained, "Each student has to take 20 to 30 tests. It seems to be that basic skills is more testing than teaching. That is all I do. Each test takes about 15 minutes per child. I have to give the tests to each child one at a time. There just doesn't seem to be any benefit in the program." Indeed, teachers we interviewed reported that valuable instructional time--the teacher's most prized resource--was considerably diminished by paperwork and testing demands--e.g., "I am actually teaching less"; "There is too much testing rather than teaching"; "I'm just not sure the kids are learning basic skills"; "It takes away from actual time spent working with children"; "There's not much teacher time to be human towards the students". Teachers chronicled for us precisely how they accomodated new paperwork demands by reducing their instructional time with students: "I really feel bad because I'll let the kids have five extra minutes of play or give them independent seatwork so I can get some of my work done. I feel bad about taking time away from my students, but I have to."

Where daily planning had once occupied teachers' after school hours, record keeping now takes its place. Where teachers once interacted before school hours, myriad state forms now compete successfully for their attention. Again typical of their sentiments are these teachers' comments, "With the paperwork, many teachers stay until seven or eight p.m. But if you have a family, you can't do that. What I want to know is, when are we supposed to teach?". "I feel like I'm robbing Peter to pay Paul. The time has to come out of somewhere, doesn't it? I can't not sleep each night because I have to do paperwork for the state. So I have to take it out of my teaching time." Rather than giving students greater opportunity to learn basic skills, and testing them to ensure mastery, MCT may instead rob them of access to their most critical learning resource--teachers' instructional time. Indeed, Darling-Hammond and Wise (1985), report identical concerns issued by teachers they interviewed. Most revealingly, teachers in our sample that found benefit in MCT reported being adequately buffered from the additional paperwork and testing demands by outside clerical assistance from either paid aides (provided by the district) or parent voluteers (coordinated by the building principal). For these teachers, then, MCT provided the intended and welcomed feedback about student progress that could serve to redirect their own teaching strategies.

Lowered teacher commitment. Implementation of MCT in the majority of schools may ironically also cause teachers to feel professionally violated: "The amount of paperwork takes all the fun out of teaching. What really bothers me is that the teachers' judgement is not considered important any longer. We used to be able to decide things...Now we teachers are frustrated. Every new program puts new burdens on us. Every new program means less time to do work with actual teaching and being with the kids. We dislike that a lot." Teachers perceived that new policies have been enacted with little

understanding of teaching realities, e.g., "I can't stand it when they make decisions about what I'm supposed to be doing when they don't understand what teaching is all about." And this: "For someone else to tell me what they think is needed when I can see some other things that are needed myself is infuriating."

Twenty percent of our sample either openly contemplated leaving the profession, or reported others were doing so, because of the increased testing and paperwork demands and their inability to derive psychic benefits because of it: "I have enjoyed teaching but I am planning to retire early because I have been frustrated in my ability to do what I know is best in my own classroom. I think that with the amount of paperwork that we have, the recording and testing and everything, that I'll leave that to someone younger." "I am really afraid that all the good teachers are going out of teaching. Sometimes I ask myself, 'Will we only have desk-sitters in the future?'"

Over sixty percent of our sample of teachers complained of lower morale on their faculties brought about by MCT: "Everyone feels bad about being a teacher these days. Everytime you turn around it seems there's always someone telling you that you're doing a lousy job. I've stopped reading the newspaper at all because if they say something negative about teachers it doesn't make me want to go to work that day... All we [the faculty] seem to do these days is complain. We all feel it. I don't think the public realizes how hard it is to do a good job--to work through teaching problems--when everyone's saying you can't."

"I think the morale of teachers is very low now. The teaching load as far as bookwork, paperwork, is just weighing them down so heavily that they resent spending their time with paperwork and not actually teaching. If we had aides to helps us put it on a computer, then we could spend more time teaching. We did have one aid for the Basic Skills Program, but she was spread so thin that she was just not that helpful to any one teacher. Teachers just realize that there are not enough hours in the day, so many of us will bring stacks of work home, and I work almost every night until 8:00 or 9:00 o'clock, sometimes midnight, at that gets old after a while. You have to enjoy what you're doing, and I do enjoy being with children, if I just had more time to teach them instead of filling out reports."

Some teachers described the personal, human costs that the decline in morale brought on: "You just don't have the enthusiam you once had. There are times when maybe I have not been as patient as I should have been. You seem to get wound tighter and tighter. There was a particular time when I really lost my temper. I was so frustrated because I had worked so very hard with a child--I would stay after school and work with him and sometimes I would even take him home. And then it was just sort of a let down...You feel like you are beating your head against the wall. I'm coming to the point that I'm enjoying teaching less. It's becoming more of a job instead of something you want to do. If I thought I could get out of teaching and into something else, I would. I've heard that from a lot of teachers. Sometimes you can put up with certain things, but when things begin to overwhelm you, everything seems to just drag you down. Most of the teachers I talk to just hate to go back to school--that's not the right attitude. It's such a frustrating thing to see really good teachers just turned off. A lot of people, rather than go through the hassle, just let things slide. I think this is what's happening. They don't resist, they just give in to it...I don't think it's only me, I think

it's a lot of teachers. And I discourage every child that that comes back to talk to me from going into teaching. I tell them there's no future in it. That's the way I feel right now." Said another, "In the past I've always enjoyed teaching. I felt like I helped in some way. Now there is so much other than teaching I am required to do. I guess I am just burned out. I am not looking forward to the Fall."

That teacher commitment may be reduced by policy changes is another noteworthy labyrinthine of education reform that begs research disentanglement. If policy changes pose too great a burden, teachers may disinvest from their work, "just let things slide" and receive social support from colleagues for the divestiture. The possibility that increased demands which teachers perceive as barriers to their classroom effectiveness may cause good teachers to defect must be entertained and examined. In sum, researchers who chart policy changes need be mindful of this fundamental paradox: The administration of MCT may place new demands that create additional problems--lower teacher commitment--that worsen the very instructional services the reform effort intended to improve. Problems that arise from the implementation of new policy are, of course, not intractable. But without research activity that assesses the effects of policy change on the teacher workforce, and without proper procedures that feedback essential information and recommendations to policy makers, there will be no corrective action undertaken.

CAREER LADDERS

Career ladders--a proposal to reward and encourage teaching excellence--offers teachers increased salaries and status in return for taking on additional school-system responsibilities. Well-conceived CLPs (e.g. Charlotte-Mecklenburg) intend to bring about a salutory effect on schools through functional assignments in which talented teachers help their colleagues improve. Functional activities include the clinical supervision of probationary and experienced teachers, and the conducting of school inservice programs. The benefits of functional assignments clearly lie in their potential to mold schools into highly collaborative environments.

The Potential of Functional Assignments

Mediated entry into teaching may help beginning teachers, a group that defects most frequently from the workforce. Where novices receive no guidance from experienced, successful teachers, they undergo severe "reality shock", as idealism yields to the understanding that before one can teach, it is necessary to manage students' sometimes unruly behavior. In isolated settings, reality shock prompts rather negative work orientations. The view that each student has different needs gives way--usually within the first year--to a custodial view where the maintenance of order is stressed, students are distrusted, and a punitive attitude toward control prevails (see Ashton et al. 1983; Bishop 1977).

New teachers in collaborative settings, however, appear to maintain the view that tending to the individual needs of students is essential (Ashton et al. 1983; Bishop 1977). The emphasis on skill development in managing student

behavior helps beginners avoid a custodial attitude, which in turn lessens their reality shock. Thus, with mentoring by highly skilled teachers, beginners' disaffection and subsequent defection from workforce may decline substantially.

Supporting the work of novices benefits experienced teachers as well, because the challenges and problems provide greater opportunity for public recognition and skill utilization. Indeed, in collegial settings, veteran teachers are more likely to perceive themselves as influential and skilled than teachers in isolated settings (Ashton et al., 1983; Chapman & Lowther 1982; Cohen 1973). Providing teachers with the opportunity to assume responsibilities, initiative, and authority commensurate with their talents and abilities, and recognizing them for a job well done, may increase their psychic rewards and their likelihood of remaining in the workforce (Chapman & Lowther 1982; Frataccia & Hennington 1982; Rosenholtz et al. 1985).

Of even greater importance to experienced teachers, however, is the degree of professional support they receive from colleagues. Beginners develop initial skills by trial-and-error learning and begin to deplete their personal fund of ideas after about the fifth year of teaching (McLaughlin & Marsh 1978; Summers & Wolfe 1977). It is at precisely this point that the organizational conditions of teaching become most crucial. Indeed, comparing the effects of school organization on relative newcomers who had taught from between one to five years with veterans who had taught from between ten to fifteen years, Rosenholtz & Greer (1985) found that organizational conditions explained 60% of how much beginners report learning, but 72% of how much veterans report learning. For experienced teachers particularly, a repository of ideas, techniques, and models, like a centripetal force, pulls them toward the same mission of professional improvement so essential to their continued commitment to the profession.

What is the potential for career ladders to develop collaborative arrangements in schools? Its success, of course, depends on how carefully the CLP is designed and implemented. Hart (1985) instructfully details one district's attempt to institute a CLP from 27 interviews she conducted with the district's principals, teachers, and superintendent.

Within this Utah district, the superintendent, assisted by a task force of administrators and teachers from each of the schools, developed a plan aimed at improving instruction by marshalling the resources of experienced and talented teachers for school-wide curriculum and instruction improvement efforts. Explicit in the plan was a commitment to the individual school as the most promising organizational level for improvement and change. Ideas were carried back and forth to faculties through task force representatives. By negotiating rather than mandating the plan, teachers developed a sense of ownership. Indeed, at the time of its implementation, 80 percent of the district's teachers voted in favor of it.

The career ladder consisted of four steps. The two highest levels--teacher specialist and teacher leader--carried with them $900, plus pay for additional contract days to work on instructional improvement projects, clinical supervision, mentoring, and assisting probationary teachers with professional development. Several benefits accrued to schools during its first year:

1. During the extended contract days, planned opportunities for teacher

collaboration were organized which resulted in increased faculty interaction and group cohesiveness.

2. Teacher leaders provided inservice based on topics identified by faculties. Teacher specialist roles were defined by each school and their number allocated by school size with an eye toward serving specific faculty needs (e.g. the number of probationary teachers needing assistance and supervision, specific program needs, faculty expertise, etc.).
3. Probationary and other teachers began to request technical assistance on their own initiative from teacher leaders who had been selected because they were esteemed colleagues. Teacher leaders benefitted a great deal from these interactions as well.
4. Teachers at all levels received reinforcement for the quality of their work. Teachers gained more knowledge of their colleagues' skills and talents.
5. Because teacher leaders were empowered and legitimized by their expertise, they shared (albeit sometimes in intimidating ways) decision-making responsibilities with building principals. As one teacher leader explained it, "There are nine people in this school who, in addition to the principal, think about the whole school and how to improve it" (Hart 1985, p.9). Principals and faculties confronted and communicated with each other on professional issues; faculty meetings evolved into substantive decision-making arenas.

In addition to the many structural features that accounted for the district's success is the unwavering leadership of the superintendent. It should be noted that at the onset of the plan, the superintendent of four years had already put in place the ingredients of an effective district (Murphy & Hallinger in press). For instance, the central office supported and encouraged teacher growth by bringing in resource people to work with teachers and by implementing a clinical supervision model for principals. In improving school quality, others have noted that the commitment, involvement, and active support of the central office is pivotal (Clark, Lotto & Astuto 1984; Huberman & Miles (1984), Hallinger & Murphy 1982). Certainly a superintendent who initiates experimentation and change in his district sets the tone, invitation, and expectation that others will do likewise in their schools.

Unintended Consequences of CLPs

We also find unintended and negative consequences in the forging of CLPs, and among their many variations there is grist for the policy researcher which, if combined with a mechanism for feedback, results in guidance for the reform itself. Some of the problems states and localities confront in their efforts to implement CLPs are identified below (see also Rosenholtz 1985b).

Evaluation standards. States and districts can and are identifying evaluation criteria that, because they are based on the teaching effectiveness literature, will probably differentiate effective from ineffective teachers. Careful validation studies still must butress local measures. However, the challenge to devise means that distinguish competent from great teachers has not, it appears, been successfully confronted. Indeed, in the districts

studied by Hart (1985) and by Natriello & Cohn (1984), the evaluation procedures plagued both localities for their lack of clarity and definition. If exceptional teaching remains more a reputational than an observable phenomenon, the implications for changing good into great teachers are few. Moreover, as we shall see below, the success of CLPs is jeopardized if teachers do not accept new testing procedures as a legitimate gauge of their classroom effectiveness.

The Southeastern teachers we interviewed were confronting the state's evaluation and selection procedures for career ladder advancement for the first time. Nearly two-thirds of them challenged the fairness and legitimacy of the evaluation system. For example, over half the teachers charged that the classroom observation procedures and the materials submitted by the career ladder applicant measured teacher cunning and endurance more than their effectiveness, e.g., "You can do anything for a few days if you know an evaluator is coming in"; "The evaluators only make three observations, two of which are arranged with the teacher. You can fool anybody for a couple of days"; "I was observed with the criteria they use in the career ladder. I thought that was kind of farce because you know when they're coming. They don't see the true teacher"; "Anyone can put on a good show when they are being evaluated"; "You can't judge a teacher by three thirty minute visits"; "The evaluators who came in were nitpicking. They were looking for picky things. They [the teachers who applied] would tell me things they got marked down on, they got real discouraged, real uptight, a lot of them dropped out, and the ones who went on were very depressed because they didn't make it. I just had the feeling that there weren't any funds and they had to make it hard, hard."

The applicant for the two highest levels of this CLP is require to submit an astonishing array of background materials such as sample lesson plans, behavioral objectives, and teacher-made materials, which apparently was weighted more heavily than actual classroom observations. According to teacher reports, these may be fabricated without the dimmest glimmer of relevance to one's actual classroom performance. Typical of their comments: "You have to write lesson plans, unit plans, and document everything with letters. People can really make this stuff up if they want to. I know people who are doing that. The main thing is that it doesn't show whether you're a good teacher or not"; "A person who is a good test-taker and does well assembling material could be a rotten teacher. They could fool anybody"; "Just because you can write down beautiful words in a portfolio does not make you a Master Teacher. I've heard talk that some teachers are getting others to write their portfolio. I don't know. I can't prove that. But you can always get somebody to do something for you for a price."

Worse still is the pervasive complaint that the construction of the portfolio robbed students as well as family members of applicants' time and attention: "The hours needed to develop a good portfolio do not reflect a good teacher, so I decided to drop out. I also think that all those hours take away from the children. The teachers don't go in fresh. Only one teacher in our school stayed in"; "The teacher across the hall was there 'til 7:30 at night. I mean for <u>months</u>. You have all you can do to teach school without having this extra burden on you"; "A friend of mine who is a very good teacher applied. She felt like she had neglected her child because this had taken so much time; her weekends, hours upon hours of things that weren't really applicable to great teaching"; "A good friend of mine applied for career level three. She

gave her whole year to three. Not only did it take away time from her classroom; it took away from her six-year-old duaghter, who finally one night begged her mother to just take the time to talk with her, because she spent every waking minute working on that stupid portfolio, and all that junk that they wanted in there. She had to choose one or the other".

Repeatedly teachers stressed that either they or their best-performing colleagues chose to devote their year to students rather than to developing a portfolio. "There are some extremely good teachers who are not going to apply simply because of the time factor that the others have gotten involved in"; "My principal really encouraged me to apply. He said that I could do it, and that I was already doing this and already doing that. And I did sign up for it. And then they started making changes and adding this and adding that, and you had to go take this test over, or go take this test in addition to that test...That was taking away from my time, and I just felt that I really needed the time to work on things to help my children and things for my classroom. So I dropped out"; "The time I spend on my job will be spent on preparing cleasses not on a portfolio, or running down the hall asking people to sign papers that I have had a student teacher or a field trip. I use my time and energy on my job"; "So many of the teachers who are excellent didn't apply because they just don't have the time. If you did lesson plans the way they wanted, you wouldn't have a home life."

Distributive justice. That career promotions may be based on faulty evaluation practices may stir teachers' sense of injustice. If the procedures by which the distribution of rewards are preceived as unjust or unfair--i.e., if the contributions of rewarded teachers are perceived as no greater than those of the unrewarded--problems of distributive justice arise. Unrewarded individuals react to injustice by attempting to restore equity in the setting. Typically they may alter the level of their own contributions downward in the direction of lower productivity, or they may leave the situation altogether (Cook & Hegtvdt 1983).

Nowhere is the theory of distributive justice better illustrated than in Natriello and Cohn's (1985) case study of one school district's efforts to implement merit pay. Here the Board of Education eliminated all across-the-board pay increments, using only competitive merit increments to raise teachers' salaries, a decision that brought scrutiny to the accuracy of evaluations. According to some teachers, the evaluation system forced principals to focus on relatively trivial aspects of teaching in order to make performance distinctions. Many teachers could not understand what they could possibly do to improve. And because they received only average increment raises instead of maximum raises, teachers who once felt superior now felt as though they were not performing adequately. The end result for some, as the theory of distributive justice predicts, was a reduction in teacher commitment.

In our study, teachers' persistent challenge to the soundness of evaluation practices caused many to forebode trouble when rewarded teachers begin to make substantially higher salary than others. Typical of their comments were the following: "I really don't feel like the teachers who applied [to the CLP] are doing a better job. There's going to be a lot of conflict"; "Neither of the two teachers who've applied for the top career levels are the best teachers in this school. If they make it, the rest of us will resent it terribly."

We interviewed some teachers just after career ladder selections had been publically announced. Each expressed grave reservation and surprise about at least some of those chosen to advanced: "I know someone who just got to career ladder position two and she's one of the poorest teachers I know. I like her as a person, but she is a lousy teacher"; "I think the Carrer Ladder has affected the morale of teachers. It used to be your morale was based on whether you felt you were a success. You could be the best teacher possible. Some teachers that are not nearly as good as other teachers have advanced or succeeded passing a certain stage and it's obvious that they are not as good a teacher as someone who did not, and that just shows it's not working. And it's going to make that teacher feel like 'Why should I give all I have anymore. What's the use? Maybe I should go and practice doing what it takes to pass the test and not worry about what goes on in my classroom.'"

Problems of distributive justice are significant not only because they may reduce the teaching commitment of the unrewarded; they may also inhibit school improvement if teachers cannot accept the legitimacy of conveyers' advice, assistance, and suggestions. How teacher selection for career ladders alters faculty interaction, then, has profound consequences for the ethos of the school.

Evaluation and collaboration. As a matter of fact, a serious and consistent foreboding by roughly a third of the teachers in our Southeastern sample about the evaluation instrument employed by the state was its threat to the positive collaborative relations teachers presently enjoyed. Teachers predict an end to offers of assistance among colleagues because all portfolio materials submitted by applicants for evaluation to the CLP had to be accompanied by evidence of their originality: "I'm not in favor of the Master Techer Plan. It's too much dog-eat-dog. I don't like the bit of someone getting an idea and wanting to close their door and not share anything with others. It hurts the children. When you do something good, you really ought to say, 'Hey, this really works well--you ought to try it'. Teachers are not going to do that if they have to document everything they've done as original. It's really hard because if you do something really well, you sure don't want anyone else to take credit for it. That's not the way education should be. That is not for the good of the children."

"One of the things that I'm worried might be negatively affected by the career ladder is sharing ideas. As part of my application I had to show them a portfolio of all the ideas I had accumulated. I think that we would wither and die if we couldn't share things with each other. I'm talking both about problems and a lot of good things that happen that we just want to share with others."

"I think the master teacher plan can lead to hoarding. We've talked about that in our school. It seems that if you don't desire master teacher status then you won't have the problem with hoarding. If you're really intent upon being a master teacher, then I think it might cause you to be a less sharing person."

"Teachers share a lot here. They are very professional. But the career ladder is changing all that. It used to be that we all had the same goals, so we helped each other. Now that recognition is being directed to individuals, everybody is trying to be their best to help themselves, not others."

"Teachers were more open and willing to share their ideas and their plans and work together and now it's kind of like 'Let me do my thing and make it as

good as I can so I can make a good mark for me.' I really think it's detrimental."

If the means to select teachers for career ladder placement are ill-designed, if they are not thoroughly informed by an understanding of the nature of school effectiveness and the dynamics of group behavior, they are not likely to succeed. Should the costs of career ladders turn out to be the collegial relations needed to enhance teacher learning and commitment, in them we have the makings of a national educational failure at the very point in our history that we need a major success.

Quota systems. A separate issue in the design of career ladders is the question of scarce rewards--plans can either promote all who meet the standards of performance, or invite wide application and competitively choose the best qualified applicants from among those who apply (Murphy, Peterson & Kauchak 1985). To be sure, competitive rewards are lauded by some; Murphy et al. (1985) argue that teachers are more likely to accept a decision if they lose a promotion to another person rather than if the accuracy of the evaluation is at stake. Several states and localities do in fact create scarce rewards by limiting the number of teachers who can be recognized (e.g. Arizona, California, Utah).

But from a sociological point of view, we know that competitive rewards have unintended and negative consequences for group interaction. There is evidence that competitive rewards function to close rather than open communication and sharing among those who work together as well as to destroy trust. In competitive settings encouragement among group members is substantially reduced, and their problem-solving capacity diminished. In fact, competitive conditions may lead people to deliberately frustrate the attempt of others' to succeed (see Rosenholtz 1985b for a review).

Because skill development for teachers depends so heavily upon collaborative support and exchange, it seem reasonable to predict that competitive rewards will substantially thwart efforts to improve. Indeed, preliminary support for this assertion comes from a study of Great Britain's career ladder plan (Blomquist et al. 1984). In most British primary schools, where the range of differences in salary is modest, teachers share a closeness and work cooperatively. But in secondary schools, where salary ranges are far greater and where competition for promotions is keener, many teachers attempting to advance do not want to share their ideas unless they received full credit for them.

In fact, teachers involved with reforms studied by Blomquist et al (1984), Hart (1985), and Natriello & Cohn (1984) lowered their school commitment if they were not promoted. They became unwilling to perform tasks on the school's behalf unless there was personal benefit to be derived. And they resented those who were promoted, making school betterment an activity restricted, in all likelihood, solely to the chosen few.

The evolution of changes among teaching colleagues, therefore, becomes critical to document. How will collaborative exchange among teachers be affected by CLPs? What additional training will be needed to help master teachers succeed in their many functional assignments? What is the best mechnism for providing it? What are the characteristics of functional assignments that appear most promising in bringing about school improvement? How can competent teachers who are not selected for advancement still be made to feel appreciated? What will happen to their commitment to the school?

Clearly, much of the worth of policy research that I argue should commence, hinges on the fact that it will provide a reliable means of assessing the teaching occupation during a time of important changes, of monitoring those changes as they occur, and of supplying essential information, analysis and advice to those who will be making them occur.

Allocation inequities. The allocation of master teachers throughout a school system or region has been neglected by many CLPs, despite the fact that "good" schools have an easier time recruiting and retaining exemplary teachers than "bad" schools, and therefore have a disproportionate share (see Rosenholtz 1985a). That all schools need access to the valuable resource of good teaching seems obvious. Without small cadres of good teachers in every school, there is little support to ease transitions into teaching or to provide for the professional development of experienced or master teachers themselves.

The Charlotte-Mecklenberg Career Ladder Plan represents a significant departure from this omission, however. Here teachers advancing to the highest levels must be willing to transfer to different schools as need for their special skill arises. But what are the costs of high mobility? In Great Britain, allocative inequities are prevented by national advertisement and competition when positions arise. Due to the large number of promotions that are possible (8 different salary points along 5 scales), however, ambitious entrants to the career ladder, in order to advance rapidly, move frequently from one place to the next, developing little school commitment along the way (Blomquist et al. 1984). High mobility of this sort may have deleterious effects by limiting opportunity to develop the sort of collegial relations in schools that make teacher and student learning possible.

It is neither the intent of any CLP to make good teachers inaccessible to poorer schools, nor to encourage their mobility from schools before the impact of their efforts can be fully realized. These and other trade-offs that are inherent in the many structural changes proposed for the teacher workforce deserve and require research attention to enhance their understanding and impact.

CONCLUSION

The next decade will be a time of enormous turmoil in the teaching occupation. A majority of our teaching workforce in 1992 will be people who are not presently employed (NCES 1984). That means well over a million new teachers will be entering the classroom during the next six years. Who they are, how they will be trained and selected, what kinds of experiences and abilities they will bring with them, and what kinds of conditions they will encounter in the schools where they work are questions of more than academic interest. For this huge turnover is beginning just as the unsatisfactory quality of American schooling has seized the interest of policy makers at all levels to make changes intended to improve that quality. And the major object of these changes is the teaching workforce itself.

The combination of demographic forces and conscious policy decisions makes for a period of extraordinary volatility within and around the teaching force. There is also the eager anticipation--and hope--that through the many permutations of policy interventions, we will ultimately improve the current lackluster performance of schools. In reality, however, not enough is known

about teachers and teaching to provide a steadfast base from which policy changes can be confidently launched. Where purposive efforts to improve quality are mounted, they may hit with highly uneven impacts if their effects are not properly anticipated. Further, without a satisfactory "feedback" mechanism, there is no avenue to supply continuing insight, constructive criticism, and dispassionate scrutiny to assist policy-makers in knowing whether their efforts are well-designed to solve actual problems or merely cosmetic changes that never penetrate beneath the surface.

The task of buttressing policy changes with real information, accurate analysis, and sound recommendation falls upon the research community. Such an ambitious enterprise has many dimensions: tracing and monitoring reform decisions; providing thoughtful and informed comment about them; offering technical advice to those who will be designing, implementing and evaluating them; and keeping in the public eye the conditions in education generally, and the teaching occupation particularly, that create compelling rationale for well-conceived changes. Only then can the promise of policy intervention become more than another episodic chapter in the history of American education.

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